

Date: Friday, 04/04/2008 9:21:13 AM
 User: Julie Lecocq

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : BK117 SKIDTUBE ASSEMBLY
 Job Number : 38388
 Estimate Number : 12899
 P.O. Number :
 This Issue : 04/04/2008 S.O. No. :
 Prsht Rev. : NC Part Number : D117762011
 First Issue : / / Type : LANDING GEAR Drawing Number : N/A
 Previous Run : 38387 Drawing Revision : A
 Material :
 Due Date : 25/04/2008 Qty: 1 Um: Each
 Written By :
 Checked & Approved By : DD 08.04.4
 Comment : Est Rev:A 07.06.11 New Issue EC
 Est Rev:B 08-02-22 change to revA DD verified by:



Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy bluefile & type labels per PPP D117-762-011 CHG001

2.0 38388A BK117 SKIDTUBE ASSEMBLY



Comment: Sub-Component BK117 SKIDTUBE ASSEMBLY

Batch: 38388A

3.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

4.0 D35121 WEARPLATE



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

WEARPLATE

Batch: 37618

5.0 AN960JD10L Washer



Comment: Qty.: 8.0000 Each(s)/Unit Total: 8.0000 Each(s)

Washer

Batch: M107321

* changed error: JD10L for C10L Batch # 107321 fix the old error in comp.

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Friday, 04/04/2008 9:21:13 AM
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Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 38388

Part Number: D117762011

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

AN3C4A

BOLT



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

BOLT

BATCH: M107376

7.0

AN451A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Bolt

BATCH: M106662

8.0

D2972

Bushing



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bushing

BATCH: B14103

9.0

MS21042L4

Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Nut

BATCH: M106825

10.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

POSITIVE
RECALL

08/07/08 (1)

08.07.07

11.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D135-751-011

Location:

PPP Rev:

DRAFT

08/07/08 (1)

12.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

POSITIVE RECALL

08/07/08 (1)

Job Completion



EFFECTIVE
RELEASED

AUTH
DATE 08.07.08

MF 08-07-04

5.0 PARTS LIST

5.1 D117-762-011 Skidtube Parts List

Item	Qty -011	Qty -041	Part Number	Description
	X		D117-762-011	SKIDTUBE INSTALLATION
	1	X	D117-762-041	REPLACEMENT SKIDTUBE
1		1	D3582-041	SKIDTUBE ASSEMBLY
2	2		**1121-51002	SKID SHOE
3	2		**1121-51102	CLAMPING RING
4	8		**LN9380M8X45	HEXAGON BOLT
5	8		**LN9023A8-1.4544.9	LOCKING WASHER
6	8		**LN9025-0815K	WASHER (OR LN9025-0815L)
10		1	*D2965	CAP
11		2	***AELS-1032-225	INSERT
12		2	*AN3C5A	BOLT
13		2	*AN960C10L	WASHER
20A		1	*D3508-9	WEARPLATE
20B		1	*D3558-9	GASKET
21A		1	*D3508-3	WEARPLATE
21B		1	*D3558-3	GASKET
22A		1	*D3508-11	WEARPLATE
22B		1	*D3558-11	GASKET
23A		1	*D3508-13	WEARPLATE
23B		1	*D3558-13	GASKET
24		36	*AELS-1032-130	INSERT
25	8	28	*AN3C4A	BOLT
26	8	28	*AN960C10L	WASHER
27	2		D3512-1	WEARPLATE
30		2	*AELS-1032-130	INSERT
31		2	*AN4-4A	BOLT
32		2	*AN960JD416L	WASHER
40		2	*D3492-049	PLUG ASSEMBLY
41		2	***NAS1611-016	O-RING
42		2	*D3492-051	PLUG ASSEMBLY
43		2	***NAS1611-015	O-RING
44		6	*D3492-053	PLUG ASSEMBLY
45		6	***NAS1611-012	O-RING
50	2		AN4-51A	BOLT
51	4		D2972	BUSHING
52	2		MS21042L4	NUT (OR MS21042-4)

* PART IS INCLUDED WITH D3582-041 SKIDTUBE ASSEMBLY

** TO BE SUPPLIED BY CUSTOMER, LISTED AS REFERENCE ONLY

*** DENOTES PART IS INCLUDED WITH ASSEMBLY ABOVE

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 RETURN TO
 ENGINEERING
 UNCONTROLLED COPY
 SUBJECT TO AMENDMENT
 WITHOUT NOTICE
 WORK ORDER
 NO. 38388

Revision: A

Date: 07.04.27

08/04

Date: Friday, 04/04/2008 9:21:39 AM
User: Julie Lecocq

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : BK117 SKIDTUBE ASSEMBLY
Job Number : 38388A	
Estimate Number : 12898	
P.O. Number :	
This Issue : 04/04/2008 S.O. No. :	Part Number : D117762041
Prsht Rev. : NC	Drawing Number : D3582 REV A
First Issue : / / Type : LANDING GEAR	Project Number : N/A
Previous Run : 38387A	Drawing Revision : A
	Material :
Written By :	Due Date : 25/04/2008 Qty: 1 Um: Each
Checked & Approved By : <u>JVO</u> <u>08.04.4</u>	
Comment : Est Rev:A 07.06.11 New Issue EC	
Prototype for engineering use only (LG0005-32910)	
Est Rev:B 08-02-22 change to revA as per dwg DD verified	
by:	



Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	DC	DOCUMENT CONTROL
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Comment: DOCUMENT CONTROL

Photocopy bluefile & type labels per PPP D117-762-041 CHG001

N/A SL

2.0	D2962150	3.540 Outer Tube, Extrut
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number Description Batch

1 D2962-150 Extrusion 28672 SL 8-4-7

3.0	SKIDTUBES 1	SKIDTUBESS RESOURCE 1
-----	-------------	-----------------------



Comment: LANDING GEAR RESOURCE 1

1-Determine square end of tube and deburr

2-Drill #30 pilot holes using DT8678. Do not open holes.

3- Deburr holes.

SL 8-4-7

4.0	BENDING	BENDING MACHINE - SKIDTUBES
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Comment: BENDING MACHINE

Bend tube as per program on CNC Bender and Dwg D3582. Use 5/16" locator pin on buggy "A".

SL 8-4-8

W/O:		WORK ORDER CHANGES					
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Process Sheet

Customer: FGU-DAR001 Dart Helicopters Services

Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 38388A

Part Number: D117762041

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Cut Fwd end of the tube using DT8185 *EL 8-4-8*

2-Cut Aft end at VC using DT8185 *SL 8-4-9*

3-Debur ends

4-Drill Aft Cap holes using DT8678 ***DO NOT OPEN AFT CAP HOLE***

5-Locate DT 8973 & Drill Ground wire hole on top of Tube.

6-Install 3/16 cleco in Ground wire hole ,then drill all X-Bolt holes using 3/16" drill.

7-Drill pilot holes for wearplates using DT8974

8-Open wearplate holes and ground wire holes to Ø19/64" (0.297") as per Dwg D3582.

9-Open Aft Cap holes using .209" drill.

10-Debur holes.

DP
8-4-9

6.0

D2964

Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Cap

Batch: *B14101 BE 08-04-09*

7.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Weld fwd cap D2964 per dwg D3582 and QSI 004

A/R AL ROD

Batch: *M106330 / M107263*

BE 08-04-09

2-Grind flush

DP 8-4-9

W/O:		WORK ORDER CHANGES					
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Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 38388A

Part Number: D117762041

Job Number:



Seq. #:

Machine Or Operation:

Description :

8.0

QC10

VISUAL INSPECTION OF GROUND WELDS



Comment: VISUAL INSPECTION OF GROUND WELDS

PD 08-04-09 / 08/04/09 (H)

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

08/04/09 (H)

10.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

PD 8-4-10

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

BE 8-4-10

12.0

D2971

Cross Bolt Spacer



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Cross Bolt Spacer
batch

338428

BE 08-04-11

13.0

D2973

Cross Bolt Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Cross Bolt Spacer
Batch

314636

BE 08-04-11

14.0

D36621

SPACER



Comment: Qty.: 3.0000 Each(s)/Unit Total : 3.0000 Each(s)

SPACER
batch

337189

BE 08-04-11

15.0

D36623

SPACER



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

SPACER
batch

337190

BE 08-04-11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

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Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 38388A

Part Number: D117762041

Job Number:



Seq. #:

Machine Or Operation:

Description :

16.0

D35841

WEB



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)
WEB *B38411*

DP 8-4-10

17.0

SKIDTUBES 1

SKIDTUBESS RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open X-Bolt holes to .750"(4Places) as per Dwg D3582, section B-B

2-Counter Sink X-BOLT holes as per Dwg D3582

3-Deburr and blow out chips from inside of tube.

4-Bond web as per Dwg D3582 & QSI 015

A/R 241 Sike Flex

Batch:

M107397

Exp Date:

8-10-30

DP 8-4-10

5-Weld x-bolt spacers(D2973) as per Dwg D3582 section B-B.

A/R AL ROD

Batch:

M107263

8-4-11

6-Grind welds flush

M 8-4-12

Tools: E

18.0

QC10

VISUAL INSPECTION OF GROUND WELDS



Comment: VISUAL INSPECTION OF GROUND WELDS

OK 08-04-14 / 08-04-14 (X)

19.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

OK 08-04-14 (X)

20.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

PRESS WASH M107550

M-1 08/04/15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 38388A

Part Number: D117762041

Job Number:



Seq. #:

Machine Or Operation:

Description :

21.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



HL



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

08-04-17

(X)

22.0

AELS1032130

INSERT



Comment: Qty.: 36.0000 Each(s)/Unit Total : 36.0000 Each(s)

Insert

Batch:

M105855

* m-h

23.0

ALS4428165

Inserts



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Inserts

batch

M 6989

***same as ALS7-428-165 QSI 0017 ***

m-h

24.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Install Wearplate & Ground Wire inserts as per Dwg D3582.

m-h 08/04/17

(IX)

25.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Inspect Inserts

N/A

08/04/17

26.0

D2965

Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Cap

Batch:

B 38605

m-h

27.0

D35083

WEARPLATE



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEARPLATE

Batch:

B 38431

m-h 08/04/17

(IX)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 38388A

Part Number: D117762041

Job Number:



Seq. #:	Machine Or Operation:	Description :
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28.0	D35089	WEARPLATE
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)
WEARPLATE
Batch: B36417

m-h

29.0	D350811	WEARPLATE
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)
WEARPLATE
Batch: B36415

m-h

30.0	D350813	WEARPLATE
------	---------	-----------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)
WEARPLATE
Batch: B36416

m-h

31.0	D35583	GASKET
------	--------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)
GASKET
Batch: B38613

m-h

32.0	D35589	GASKET
------	--------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)
GASKET
Batch: B36420

m-h

33.0	D355811	GASKET
------	---------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)
GASKET
Batch: B36419

m-h

34.0	D355813	GASKET
------	---------	--------



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)
GASKET
Batch: B36418

m-h 08/04/17

(IX)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BK117 SKIDTUBE ASSEMBLY

Job Number: 38388A

Part Number: D117762041

Job Number:



Seq. #:

Machine Or Operation:

Description :

35.0

AN3C4A

BOLT



Comment: Qty.: 28.0000 Each(s)/Unit Total : 28.0000 Each(s)

BOLT

Batch:

M107376

m-h

36.0

AN3C5A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Bolt

Batch:

M106780

m-h

37.0

AN44A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Bolt

batch

M101291

m-h

38.0

AN960C10L

washer



Comment: Qty.: 28.0000 Each(s)/Unit Total : 28.0000 Each(s)

washer

Batch:

M107376

m-h

39.0

AN960JD10L

Washer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Washer

batch

M104885

m-h

40.0

AN960JD416L

Washer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Washer

batch

M107008

m-h

41.0

D3492049

PLUG ASSEMBLY



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

PLUG ASSEMBLY

batch

B37288

m-h

08/04/17

(1X)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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Job Number: 38388A

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Job Number:



Seq. #: Machine Or Operation: Description :

42.0 D3492051 PLUG ASSEMBLY



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)
PLUG ASSEMBLY
batch B 37289

m-l

43.0 D3492053 PLUG ASSEMBLY



Comment: Qty.: 6.0000 Each(s)/Unit Total: 6.0000 Each(s)
PLUG ASSEMBLY
batch B 38430

m-l

44.0 HAND FINISHING1 HAND FINISHING RESOURCE #1



(IX)

Comment: HAND FINISHING RESOURCE #1

1-Inspect for Foreign objects

2-Install Aft cap as per Dwg D3582, Detail "C"

A/R 241 Sika Flex Batch:

Exp Date: 08/10

M107397

3-Install Wearplates as per Dwg D3582,

Note: Install Bolt and washer on Ground Wire inserts on top of tube see section D-D of dwg D3582

*****Do not install bolts where indicated on Dwg(Note #6)*****

A/R 241 Sika Flex Batch:

Exp Date: 08/10

M107397

m-l 08/04/17

4- Wing Walk as per Dwg D3043 and QSI 005 4.4

M106894

FL 08/04/21 (1)

45.0 QC5 INSPECT WORK TO CURRENT STEP



PLT 06.07.08

Comment: INSPECT WORK TO CURRENT STEP

08/04/21 (1)

46.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D117-762-041

Location:

PPP Rev:

PP 38388 08/07/03

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Job Number: 38388A

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Seq. #:

Machine Or Operation:

Description :

47.0

QC21

FINAL INSPECTION/W/O RELEASE



08/07/08 JH

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



POSITIVE RECALL

EFFECTIVE

RELEASED

08/07/08 AUTH LL
PO DATE 08-07-08

MF 08-07-08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

PARTS LIST FOR D3582-041 SKIDTUBE ASSEMBLY

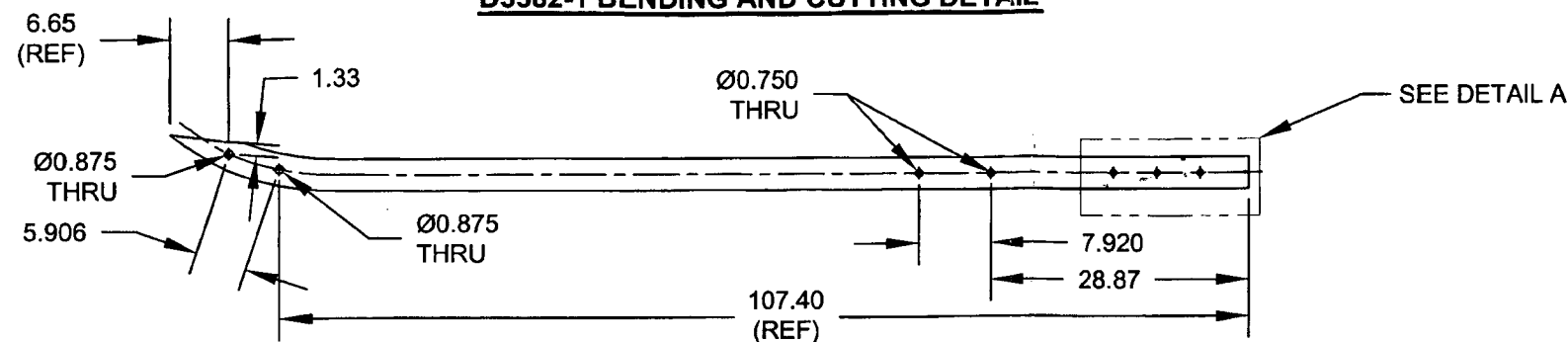
Qty	Part Number	Description
X	D3582-041	SKIDTUBE ASSEMBLY
1	D2962-150	EXTRUSION
1	D2964	CAP
1	D2965	CAP
1	D2971	CROSS BOLT SPACER
2	D2973	CROSS BOLT SPACER
2	D3492-049	PLUG ASSEMBLY
2	D3492-051	PLUG ASSEMBLY
6	D3492-053	PLUG ASSEMBLY
1	D3508-3	WEARPLATE
1	D3508-9	WEARPLATE
1	D3508-11	WEARPLATE
1	D3508-13	WEARPLATE
1	D3558-3	GASKET
1	D3558-9	GASKET
1	D3558-11	GASKET
1	D3558-13	GASKET
1	D3584-1	WEB
3	D3662-1	CROSS BOLT SPACER
1	D3662-3	CROSS BOLT SPACER
36	AELS-1032-130	INSERT
2	ALS7-428-165	INSERT
28	AN3C4A	BOLT
2	AN3-5A	BOLT
2	AN4-4A	BOLT
28	AN960C10L	WASHER
2	AN960JD10L	WASHER
2	AN960JD416L	WASHER

GENERAL NOTES:

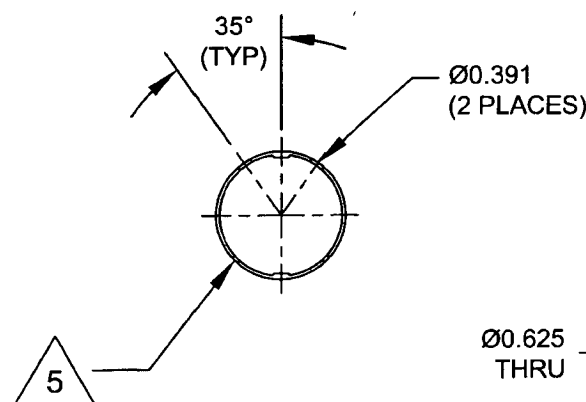
- ALL DIMENSIONS ARE IN INCHES
- TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- WELDING TO BE DONE PER DART QSI 004.
- INSERT D3584-1 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015 AFTER BENDING.
- USE DART DRILL TEMPLATE DT8900 TO LOCATE AND DRILL $\varnothing 0.297$ HOLES (36 PLACES) FOR WEARSHOE INSERTS. INSTALL AELS-1032-130 PER SECTION G-G (36 PLACES) AFTER FINISH. SEAL WEARPLATE BOLTS WITH SIKAFLEX-241/-291.
- DO NOT INSTALL AN3C4A BOLTS AND AN960C10L WASHERS IN INDICATED LOCATIONS.
- FINISH:
 - CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3584-1 WEB.
 - POWDER COAT ASSEMBLY GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3.
 - ANTI-SKID PAINT AS INDICATED TO 1.00 ABOVE CENTER LINE PER DART QSI 005 4.4



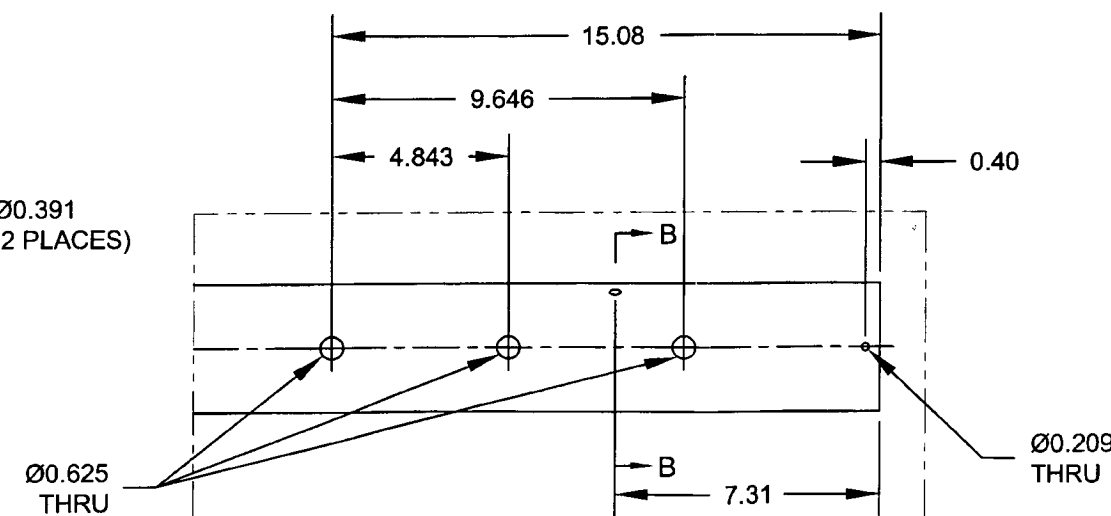
D3582-1 BENDING AND CUTTING DETAIL



D3582-1 DRILLING DETAIL



SECTION B-B
SCALE 1:5



DETAIL A
SCALE 1:5

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07.11.22

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A	NEW ISSUE	PH	07.06.08
REV.	DESCRIPTION	BY	DATE
DESIGN	PH	DART AEROSPACE USA, INC PORT HADLOCK, WA	
DRAWN	PH		
CHECKED	PH	DRAWING NO.	REV. A
MFG. APPR.	PH	D3582	SHEET 1 OF 2
APPROVED	PH	TITLE	SCALE
DE APPR.	PH	BK 117 SKIDTUBE ASSEMBLY	1:2
DATE	07.06.08	COPYRIGHT © 2007 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

8

7

6

5

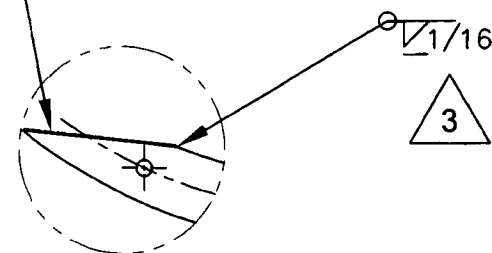
4

3

2

1

D2964 CAP
(GRIND FLUSH)



DETAIL C
SCALE 1:10

D2971 SPACER

AFTER FINISH
INSTALL,
D3492-049
PLUG ASSEMBLY
(2 PLACES)

SECTION D-D
SCALE 3:10

AFTER FINISH
INSTALL,
D3492-051
PLUG ASSEMBLY
(2 PLACES)

SECTION E-E
SCALE 3:10

D3662-3 SPACER

SECTION D-D NOTES

AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D2971 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.750 DRILL TO REMOVE SPILL OVER
5. AFTER FINISH, INSTALL D3492-049 PLUG ASSEMBLY (2 PLACES)

SECTION E-E NOTES

AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D3662-3 SPACER
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.672 DRILL TO REMOVE SPILL OVER
5. AFTER FINISH, INSTALL D3492-051 PLUG ASSEMBLY (2 PLACES)

DETAIL C

D3558-9
D3508-9

NO BOLTS AT
THESE LOCATIONS

6

D3558-3

D3558-11

D3508-3

D3508-11

DETAIL H

D3558-13

D3508-13

NO BOLTS AT
THESE LOCATIONS

6

D3582-041 ASSEMBLY DETAIL

BLACK ANTI-SKID

8.0

16.2

BLACK ANTI-SKID (TYP)

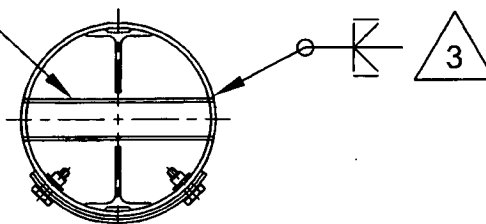
16.0

5.0

0.8

D3582-041 BLACK ANTI-SKID DETAIL

D2973 SPACER
(2 PLACES)



SECTION F-F
SCALE 3:10

D3584-1 WEB (REF)

D3662-1 SPACER
(3 PLACES)

AFTER FINISH, INSTALL
AELS-1032-130
INSERT (36 PLACES)

5

AN3C4A BOLT (1)
AN960C10L WASHER (1)
(28 PLACES)

5

SECTION G-G
SCALE 3:10

AFTER FINISH, INSTALL
ALS7-428-165 INSERT (1)
AN4-4A BOLT (1)
AN960JD416L WASHER (1)
(2 PLACES)

AFTER FINISH
INSTALL,
D3492-053
PLUG ASSEMBLY
(6 PLACES)

D3584-1 WEB
(REF)

SEAL WITH
SIKAFLEX -241/-291

D2965 CAP

AN3-5A BOLT (1)
AN960JD10L WASHER (1)
(2 PLACES)

DETAIL H
SCALE 1:5

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SECTION F-F NOTES

AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D2973 SPACER (2 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.625 DRILL TO REMOVE SPILL OVER

SECTION G-G NOTES

AFTER BENDING AND DRILLING ASSEMBLY
PERFORM THE FOLLOWING:

1. CHAMFER HOLE 0.030 x 45°
2. INSERT D3662-1 SPACER (3 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. PASS Ø0.515 DRILL TO REMOVE SPILL OVER
5. AFTER FINISH, INSTALL D3492-053 PLUG ASSEMBLY (6 PLACES)

DESIGN	PH	DART AEROSPACE USA, INC	
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CHECKED	h	DRAWING NO.	REV. A
MFG. APPR.	h	D3582	SHEET 2 OF 2
APPROVED	h	TITLE	SCALE
DE APPR.	h	BK 117 SKIDTUBE ASSEMBLY	1:20
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NO: 148

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: B Barclay Elliot
Job number: 38322A
Part number: D117 762 Oul
Description: Skid tube Bk117
Welding Process: Tig[☒] Mig[]
Base materiel: Aluminium
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap) pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Red. Duval Date of Test Coupon 08-04-14

Welder B Barclay Elliot Date of Test Coupon 08-04-14

The above named individual is qualified in accordance with AWS D17.1.2001 to weld